



Discovery Investor Communication

TECHNICAL OVERVIEW OF DISCOVERY LIFE'S EARNINGS AND ACCOUNTING
POLICY

FEBRUARY 2018

1. Introduction

Discovery reports under IFRS and the majority of Discovery Life and Invest's contracts are classified as insurance contracts under IFRS4. Discovery's June 2022 full year results will be subject to the changes introduced by IFRS 17.

The purpose of this note is to provide a high level technical overview and explanation of the earnings reported by Discovery Life for the financial year ending 30 June 2017.

2. Overview of accounting policy relating to insurance contracts

Discovery's accounting policy with regards to insurance contracts is described in detail in the AFS as policy 13.

The actuarial value of policyholder liabilities is determined based on a **prospective** discounted cash flow basis calculated as the difference between the present value of future expected outgo (benefit payments plus expenses and other outgo) and the present value of future income (premiums).

Discovery Life and Invest sell profitable business even when valued using conservative reserving assumptions. Applying the reserving basis using best estimate assumptions PLUS prescribed 1st tier margins would result in an upfront gain being recognised at inception of a block of new business, i.e. the expected profit margin exceeds the prescribed margins. **Discretionary margins are therefore added to the reserving basis to avoid the premature recognition of expected future profits. The aim at initial recognition is to achieve an overall portfolio reserve transfer that broadly offsets acquisition and upfront costs. This avoids the premature recognition of future profits.**

Discovery's accounting policy that describes recognition and measurement of life insurance contracts sets the framework which governs how reserving margins are set.

Discovery actively reviews its valuation basis. The accounting policy explicitly states "*margins are reset at every valuation date to reflect the underlying profitability of the portfolio*" and "*Margins are released over the term of a policy in line with the risk borne*". The intention behind these statements is to ensure that margins are actively reviewed at each valuation date to ensure that the release of margins over the term of the policy is kept consistent with the latest view of the portfolio profitability and the duration of the risk borne. A change to the projected *future* profitability of the underlying portfolio is thus expected to result in a reset of the margin. For example assumption changes and certain experience variances (impacting on *future* expected profitability) will require a change to the margins, which may be either positive or negative.

The reserving basis further acts as an impairment test to ensure that the assets under insurance contracts (also referred to as the negative reserve) are not over stated compared to what the cash flows can support using prudent assumptions. This is explicitly stated in the accounting policy: “The valuation basis meets the requirement of the liability adequacy test”.

It is worth highlighting some of the implications of Discovery’s accounting policy with regards to insurance contracts:

- Prospective reserves are based on expectation of *future* cash flows. The unwind of the reserves follow the expected unwind of future cash flows which could be materially different to a straight line unwind of a retrospective reserve (e.g. a Deferred Acquisition Cost type asset).
- The long term insurance reserves are set based on prudent assumptions. The reserving assumptions include compulsory and discretionary margins compared to the best estimate assumptions.
- Profits and losses are avoided at the point of sale (initial recognition) on a portfolio basis, i.e. where policies are grouped together as a portfolio.
- Experience variances impacting the end of period reserves are offset by releasing or increasing discretionary margins. The exception is that variances as a result of the number of policies in-force are *not* offset against discretionary margins under the current accounting policy. Variances due to higher or lower lapses vs expected are therefore not absorbed by the release or increase of discretionary margins.
- Experience variances impacting cash flow in the period are recognised through profit or loss. E.g. claims experience being higher than expected will give rise to a recognised negative variance in the period.
- Where no discretionary margins exist, negative experience variances cannot be absorbed from a release of margin, i.e. the prudent basis impairment test will apply and be reflected in Discovery Life’s income statement.
- Discovery performs a detailed reasonability check and reconciliation to ensure compliance with its accounting policy at each valuation date.

3. Reserve unwind and its impact on earnings

Life insurance earnings are significantly influenced by reserving assumptions.

In the simplified case, Life insurance earnings can be explained as the sum of the following components:

- Unwind of reserving margins
- Unwind of discount rate in the case of negative liabilities
- Plus or Minus experience variances to expected cash flows
- Plus or Minus changes to the expected end period reserves as a result of net assumption changes / net experience variances. (Net of offsetting margin changes)

From the above it follows that earnings are impacted by *deviations from expected cash flows* rather than by the expected cash flows itself. Comparing IFRS earnings to cash flow emerging within a specific period will not necessarily provide insights into the IFRS emergence over time.

Consider some overly simplified examples of a simple 5 year term life policy. The intention behind the simplified examples is merely to illustrate the impact of the interest on the negative reserve and no other conclusions about the profit emergence should be drawn from these simplified examples.

Example 1 shows the profit emergence on a best estimate **pricing** basis with reserving margins set to avoid an upfront profit at inception and to ensure a reasonable unwind over time. Note the pricing basis allows for the time value of money through the use of discounted cash flows. This implicitly allows for financing cost (at the discount rate) as if the negative reserve was externally financed.

Example 1:

Year	Premium	Expenses	Commission	Claims	Cash flow	Reserve	Transfer to Reserve	Interest on Reserve funding	End of year gross profit ¹
1	100	110	100	10	-120	-134	-134	-	14
2	100	10	33	15	42	-118	16	-13	13
3	100	10	-	20	70	-73	45	-12	14
4	100	10	-	25	65	-30	43	-7	14
5	100	10	-	40	50	-	30	-3	17

¹End of year gross profit = Premium – Expenses – Commission – Claims – transfer to reserve + interest

Example 2 shows the profit emergence in the absence of external financing costs. Discovery Life's negative reserve is reported net of FinRe and hence example 2 is indicative of Discovery Life's earnings position with respect to this item, since in-force FinRe repayments are already allowed for in Discovery Life's expected cash flows and expected reserve transfers.

Example 2:

Year	Premium	Expenses	Commission	Claims	Cash flow	Reserve	Transfer to Reserve	Interest on Reserve funding	End of year gross profit
1	100	110	100	10	-120	-134	-134	-	14
2	100	10	33	15	42	-118	16	-	26
3	100	10	-	20	70	-73	45	-	25
4	100	10	-	25	65	-30	43	-	22
5	100	10	-	40	50	-	30	-	20

The interest unwind in the negative reserve is a significant source of earnings given the large underlying net negative reserve in the business. The negative reserve is the discounted value of a portion of expected future operational cash flow. The unwind is thus related to the time value of these expected future operational cash flows. Put differently it emerges over time as a portion of premiums which compensates shareholders for having funded the acquisition costs of new business. It is thus not inappropriate for this surplus to unwind into earnings. This is true under both the current IFRS 4 as well as under IFRS 17 based on our understanding of IFRS 17. Put differently, in the pricing basis we have allowed for an expense item (time value of money), so if the expense item is not present then the premiums priced to fund this expense item will naturally drop down into earnings.

It is also important to note that reserving assumptions can merely change the pace of earnings recognition and not the quantum of total earnings over time.

The reserving cash flows are shown in appendix 1.

4. IFRS 17 principles compared to current accounting policy

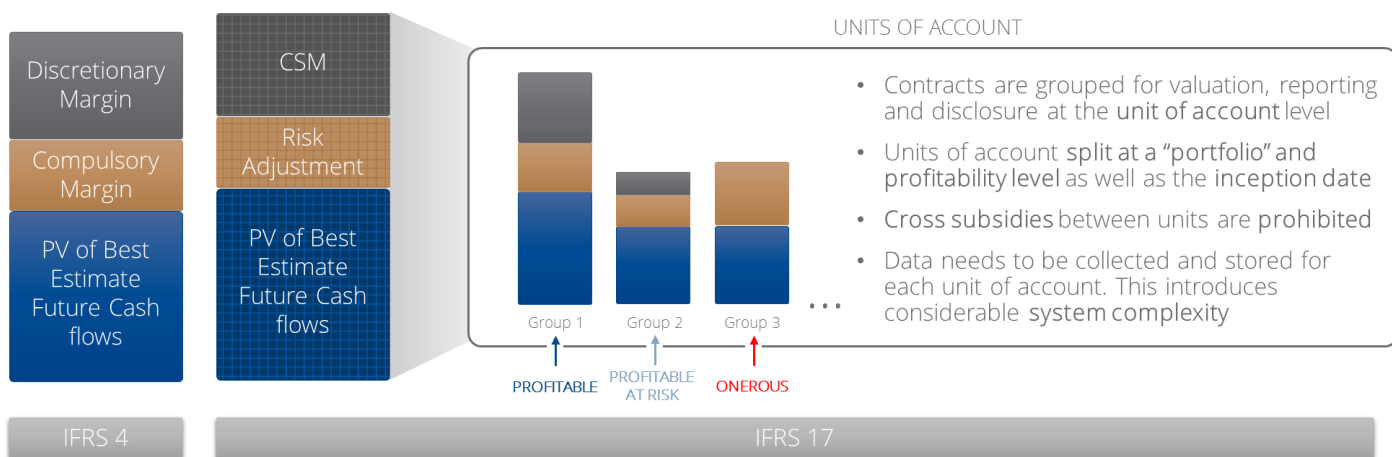
IFRS 17 becomes effective for reporting periods starting from 1 January 2021. Its details and implementation requirements represent a significant departure from insurance contracts' measurement and recognition under IFRS 4.

The complexity of IFRS 17, the accounting policy decisions required, the impact of transitional arrangements and the judgement required in certain aspects of its implementation makes it very difficult, if not impossible, to guess the extent of its impact on a specific life insurance entity without a substantial and detailed exercise with access to per policy level data. Discovery is still in the process of analysing the potential impact of IFRS 17 as well as modelling various scenarios and cannot give guidance as to the potential impact on earnings yet. Only high level comparisons between Discovery Life's current accounting policy principles and IFRS 17 principles can be drawn.

The table below highlights some of the key principles between IFRS 17 and Discovery's current accounting policy principles with regards to life insurance contracts:

Principle / concept	Discovery accounting policy under IFRS 4	IFRS 17	Comments
Profit at initial recognition?	No profit or loss at initial recognition	No profit at initial recognition but losses are recognized.	Consistent in terms of profits but IFRS17 will recognize losses on onerous contracts.
Acquisition costs to be deferred	All acquisition costs	<i>Directly attributable</i> acquisition costs, including costs in respect of unsuccessful sales.	Some differences in attributable costs, e.g. branding
Margins added to best estimate assumptions	Compulsory and discretionary	Risk Adjustment (RM) and Contractual Services Margin (CSM).	Similar in concept. Discretion as to the level of the RM and hence the CSM.
Experience variances offset against margins	Yes, except for policies no longer in-force. Applied at portfolio level.	Yes, <i>including</i> for policies no longer in-force. Applied at the unit of account level.	Similar, but IFRS17 potentially allows for greater degree of absorption of experience variances within a unit of account by adjusting the CSM.
Changes in discount rate	Absorb through margins.	Policy decision required. If OCI is elected, then variances below the line.	IFRS 17 could potentially move investment variances below the line
Unwind of discount rate inherent in negative reserve	In operational earnings & unwind at single rate.	In operational earnings and unwind at single rate.	Consistent
Unit of account	Portfolio level	Differentiate between 3 groups: profitable, profitable but at risk and unprofitable	Unit of account introduces complexity / separates different policies
Date of commencement cohorts	No differentiation of basis by DOC alone.	Separation of basis / economic assumptions by DOC	Different economic assumptions by DOC. RM & CMS tracked separately by DOC.
Reserving approach	Prospective	Prospective	Consistent

At a high level, the current approach to margins can be compared to IFRS 17's approach to margins as per the diagram below:



Specifically the high level concept of no profit at point of sale as well the overall principle of absorbing variances and assumption changes are very similar. The unwinding of the interest rate implicit in the calculation of the negative reserve is also similar.

5. Earnings reasonability check compared to margins

Section 3 above explained the reserve unwind mechanics and has demonstrated that cash flows and earnings are two different concepts for a life insurance company that follows prospective reserving principles.

Discovery Life's embedded value and reserving bases are internally consistent and given the overall accounting policy aim of not recognizing profits or losses at initial recognition on a portfolio, the new business margin disclosed as part of embedded value reporting can be used as a high level reference to the IFRS reporting in a period for the portfolio. If the compulsory and discretionary margins were set to defer future profits (i.e. profits have not been materially capitalized or deferred at initial recognition) then one would expect future earnings to unwind consistently with the profit margin. This assumes a uniform unwind of the margin which should be seen as a significant simplification but might still be useful for illustration purposes.

For the year ending 30 June 2017 Discovery Life reported gross earnings of R3,607m. The premium income during the period was R9,993m and hence gross earnings were c36% of premium.

This can be tested (purely for illustration) against a high level reasonability check by considering the underlying components within Discovery Life. Note that the DRO business needs to be excluded given the different mechanics of the DRO. The June 2017 published numbers excluded DRO from the Discovery Life numbers and hence based on June 2017:

Expected net of tax, gross of CoC margin of 10.75% of premiums ¹ :	R1,074m
Add back tax of 28 ² %	R418m
Add unwind of interest on negative reserve estimate ³ :	R1,957m
Recognised experience variances plus balancing items ⁴ :	R158m
Gross of tax earnings:	R3,607m

Notes:

- 1) Historic VNB margin for Life averages around 10% as an indication. Add back 0.75% margin to approximately compensate for Cost of Capital which is a non IFRS item. Thus $R9,993m * 10.75\% = R1,074m$.
- 2) Item 1) grossed up for tax: $28\% * [(1) / 0.72]$
- 3) Average net negative reserve for the period * average risk free rate: $(R23,720m - R5,868m + R27,650m - R6,839m) / 2 * 10.125\% = R19,332m * 10.125\% = R1,957m$

- 4) Recognised experience variances and other items given approximate calculation and timing differences

The high level reasonability check confirms that the Discovery Life earnings for the year ending 30 June 2017 is broadly within the range that would have been expected if the average margin emerged in the year and allowing for the unwind of premium income that compensates shareholders for the time value of money at the risk free rate.

6. Historic net worth variances

Rm	Dec17	Jun17	Jun16	Jun15	Jun14	Jun13	Total
Expected in-force cash flow (net of tax & existing FinRe repayments) ⁽¹⁾	1,014	2,157	2,119	1,905	1,459	1,339	9,992
In period experience variances (excl policy alterations & new funding) ⁽²⁾	-14	-264	-62	35	282	-61	-83
Methodology & assumption changes (excl new FinRe) ⁽³⁾	-31	-91	-279	-200	-358	45	-914
Sub total: (before new buss costs and new funding)	970	1,803	1,778	1,739	1,383	1,322	8,995
Servicing & upsell activity on existing business:	-237	-491	-434	-381	-396	-373	-2,312
Financing on existing business:	636	1,649	1,251	1,833	813	812	6,994
Existing business total:	1,369	2,961	2,596	3,191	1,799	1,761	13,677
New business acquisition costs	-1,225	-2,394	-2,316	-2,191	-1,908	-1,853	-11,888
New initiative costs	-36	-60	-37	-84	-78	-94	-389
Cash Flow (excl shareholder cash flows)	107	506	243	916	-187	-187	1,399
Plus shareholder cash flow	247	89	36	173	302	337	1,184
Net cash flow (before dividends)	354	595	279	1,090	115	150	2,583

⁽¹⁾Includes half a period's worth of post point of sale cash flow on new business written in the period. Includes repayment on existing FinRe arrangements

⁽²⁾Net Worth changes from Table 5 "Experience variances" in EV statements. Excludes "Policy alterations"

⁽³⁾Net Worth changes from Table 6 "Methodology and assumption changes" in EV statements. Excludes "Reinsurance"

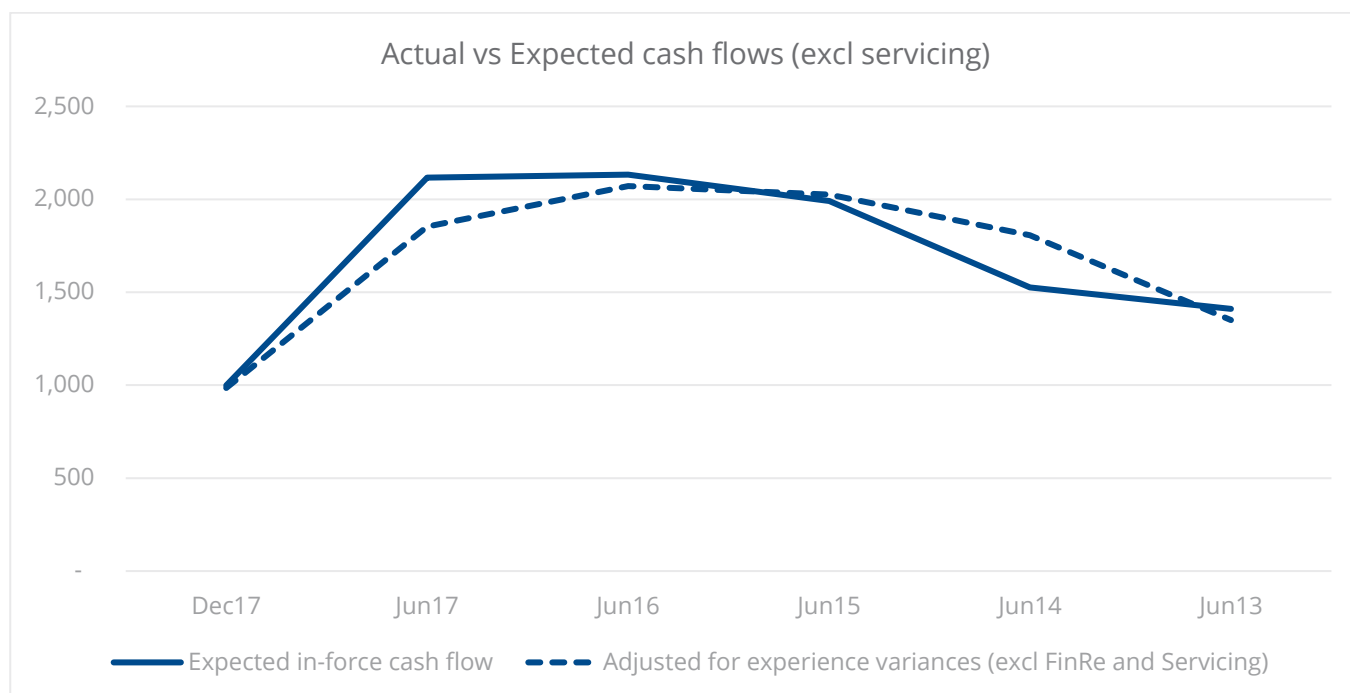
Excluding FinRe and acquisition costs on upsell activity, the variances on the in-force book cash flow was -cR83m or -0.8% of expected cash flow over the last 5½ year period.

Assumption changes impacted the cash flow to the extent of -cR914m driven by a number of changes over time. This includes the impact on zeroised reserves and hence a significant component of this movement is a reserving strain under the current SVM reserving basis.

The combination of servicing activity and funding through FinRe improved cash flow by cR4,682m.

The net result is cash flow emergence of **cR13,7bn on the in-force book over the last 5½ years once the total net worth movements, including FinRe and servicing, are considered.**

This is illustrated in the graph below:



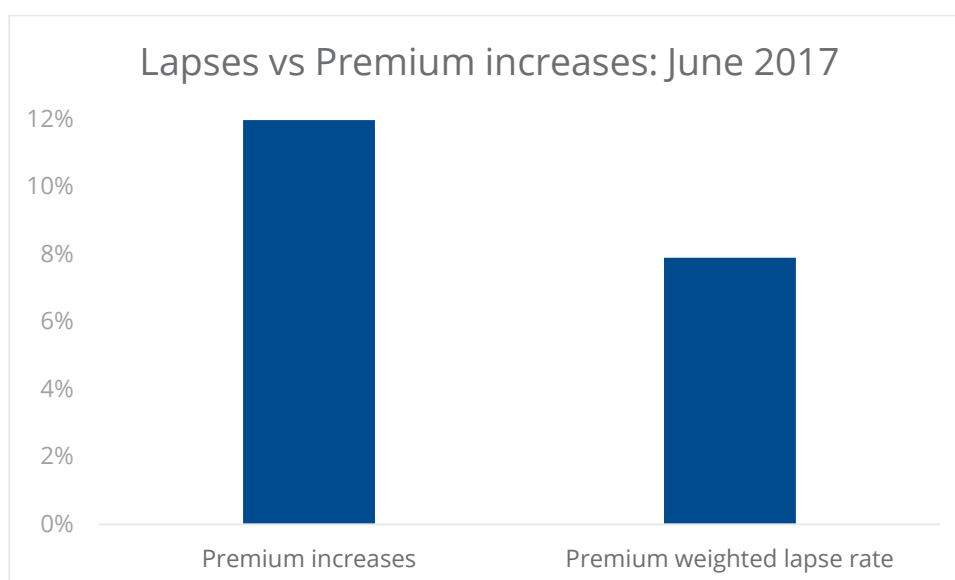
7. Sources of margin in Discovery Life products

Discovery Life's individual and group books are characterized by profitable business. The vast majority of Discovery Life's premium income is from the long term individual book. The individual book is characterized by:

- Long term business with whole of life benefits
- High take-up of profitable ancillary benefits
- High level of Vitality engagement and integrated products delivering shared value benefits to customers, intermediaries and to Discovery
- The shared valued model incentivises better persistency amongst the healthier lives and acts as an antidote to traditional selective lapsation
- High proportion of escalating cover and hence escalating premiums which increase over time in real terms.

The combination of the shared value model and high take-up of profitable business mix is expected to deliver robust margins over the long term.

The premium increase rate on the in-force Discovery Life individual business book further exceeded the premium weighted lapse rate by c4% over the financial year ending June 2017:



8. Expense allocation

Discovery Life conducts a detailed expense analysis and allocation at each reporting date.

For the financial year ending 30 June 2017, Discovery Life and Invest reported Acquisition cost of R2,587m and Marketing and administration costs of R2,199m. It should be noted that the Marketing and administration costs include direct expenses in relation to the sales force as well as certain new business expenses directly related to sales, e.g. underwriting costs. Approx. R1,805m of spend related to management expenses that included both new business related costs and costs related to the in-force book. The costs of administering the in-force book in the absence of future new business related activities needs to be determined to accurately allow for renewal expenses in the projected cash flows of in-force policies.

The cost allocation can be summarised as follows:

	Rm	Rm
Acquisition costs		R2,587m
Marketing and Admin cost:		R2,199m
Sales related	R394m	
Initial costs allocations	R1,016m	
Renewal cost allocations	R789m	

Discovery Life and Invest are innovative companies with a disciplined approach to ensure frequent launches of new offerings and technologies to the market. A significant component of Discovery Life and Invest's management expenses thus relate to the development and implementation of new products and technologies. The expense allocation reflects this fact and approx. 56% of the management expenses referred to above (i.e. the R1,805m) related to new business development and related activities during the year ending 30 June 2017. The other

approx. 44% were allocated to renewal or maintenance related expenses. Discovery Life and Invest remains confident that expense efficiencies could be obtained as the book grows, a positive renewal expense variance of R48m was reported in the embedded value statement for the year ending 30 June 2017 which confirmed actual expenses were lower than assumed.

9. Risks to earnings recognition

Note 2 to the AFS gives a detailed description and disclosure around Discovery's management of insurance risk.

The note demonstrates that approx. 60% of value from cash flow underlying the value of the assets under insurance contracts (negative reserve) on the in-force book is projected to emerge in the first 10 years and approx. 80% of the value is projected to emerge in the first 20 years.

This is not considered to be unreasonable given the long duration of Discovery Life's policies. It is important to consider discounted cash flows given South Africa's relatively high interest rates and to ensure consistency with reported value metrics.

Various risks are described in note 2 and sensitivities are provided on the key assumptions underlying the assets under insurance contracts calculation. Discovery is confident in the underlying assumptions and a rigorous process is followed to set the underlying assumptions, including multiple layers of internal and external review, challenge and validation. The assumptions underlying the assets under insurance contracts calculation contain compulsory and discretionary margins and hence a substantial buffer exists before the economic value has any risk of falling short of the recognized value.

Experience variances do arise from time to time when compared against the best estimate assumptions. This is to be expected when experience is compared to point estimates. Negative experience variances in particular are acted on by intervening and rectifying the underlying economic cause where possible. If evidence emerges that an assumption is no longer valid or commercial interventions are not sufficient then the assumption will be changed in line with the latest expectations.

10. Conclusion

Discovery Life's earnings reported for the financial year ending 30 June 2017 complies with its accounting policy and is consistent with its expected profit margins and premium loadings that provide compensation to shareholders for having funded its acquisition cost on the in-force portfolio. The unwind of the interest on the negative reserve is included as operating earnings which is not inappropriate.

The earnings reported during the year ending 30 June 2017 are further consistent with a simple high level reasonability check considering the expected margins unwinding from the in-force book.

IFRS earnings and cash flow emergence are two separate concepts for life offices recognising negative reserves and should be treated with care and due consideration.

Although there are significant technical differences between IFRS 17 and Discovery's current accounting policy regarding recognition and measurement of insurance contracts, many of the fundamental principles are consistent.

Discovery Life Ltd was financially strong at 30 June 2017 and covered its regulatory capital requirement (CAR) 3.9 times.

Appendix 1

Consider a simple 5 year term life policy with annual premium of R100, initial expenses of R100, renewal expenses of R10, Initial commission of R100, Renewal commission in year 2 of 1/3 of initial and claims as shown below. For reserving purposes the renewal expenses were doubled and the claims were increased by 17.5%.

A discount rate of 10% was used for illustration. It was further assumed that all cash flows occur at the start of the period for simplicity.

Best estimate

Year	Premium	Expenses	Commission	Claims
1	100	110	100	10
2	100	10	33	15
3	100	10	-	20
4	100	10	-	25
5	100	10	-	40

Reserve		+100% on renewal		+17.5%	
Year	Premium	Expenses + margin	Commission	Claims + margin	Reserve ¹
1	100	120	100.0	11.75	-133.67
2	100	20	33.3	17.625	-118.00
3	100	20	-	23.5	-73.30
4	100	20	-	29.375	-30.00
5	100	20	-	47	-

¹Reserve(t) = Reserve(t+1) / (1 + i%) + [Expenses(t+1) + Commission(t+1) + Claims(t+1) - Premium(t+)] / (1+i%);
Where i% = 10%